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## NOTICE OF ALLOWANCE AND FEE(S) DUE

530

7590

07/11/2008

LERNER, DAVID, LITTENBERG,  
KRUMHOLZ & MENTLIK  
600 SOUTH AVENUE WEST  
WESTFIELD, NJ 07090

EXAMINER

CUTLER, ALBERT H

ART UNIT

PAPER NUMBER

2622

DATE MAILED: 07/11/2008

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/761,683	01/21/2004	Manabu Hara	SONYIP 3.0-355	3355

TITLE OF INVENTION: PIXEL COMPENSATING CIRCUIT, METHOD FOR COMPENSATING PIXELS, AND IMAGE TAKING APPARATUS  
EMPLOYING SUCH PIXEL COMPENSATING CIRCUIT

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	\$1440	\$0	\$1440	\$1440	10/14/2008

**THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED.** THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

**THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED.** SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

### HOW TO REPLY TO THIS NOTICE:

I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

A. If the status is the same, pay the TOTAL FEE(S) DUE shown above.

B. If the status above is to be removed, check box 5b on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above, or

If the SMALL ENTITY is shown as NO:

A. Pay TOTAL FEE(S) DUE shown above, or

B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check box 5a on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and 1/2 the ISSUE FEE shown above.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

**IMPORTANT REMINDER:** Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

# **PART B - FEE(S) TRANSMITTAL**

**Complete and send this form, together with applicable fee(s), to:** **Mail** **Mail Stop ISSUE FEE**  
**Commissioner for Patents**  
**P.O. Box 1450**  
**Alexandria, Virginia 22313-1450**  
**or Fax** **(571)-273-2885**

**INSTRUCTIONS:** This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

530 7590 07/11/2008  
**LERNER, DAVID, LITTENBERG,**  
**KRUMHOLZ & MENTLIK**  
**600 SOUTH AVENUE WEST**  
**WESTFIELD, NJ 07090**

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

## **Certificate of Mailing or Transmission**

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE; address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

(Depositor's name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10761.683 01/21/2004 Manabu Hara SONYJP 3.0-355 3355

**TITLE OF INVENTION: PIXEL COMPENSATING CIRCUIT, METHOD FOR COMPENSATING PIXELS, AND IMAGE TAKING APPARATUS EMPLOYING SUCH PIXEL COMPENSATING CIRCUIT**

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	\$1440	\$0	\$1440	\$1440	10/14/2008

EXAMINER	ART UNIT	CLASS-SUBCLASS
CUTLER, ALBERT H	2622	348-246000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

- ☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.  
☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. Use of a **Customer Number is required.**

2. For printing on the patent front page, list

- (1) the names of up to 3 registered patent attorneys or agents OR, alternatively, 1  
 (2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed. 2  
 3

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE (B) RESIDENCE: (CITY AND STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent): ☐ Individual ☐ Corporation or other private group entity ☐ Government

4a. The following fee(s) are submitted:

- ☐ Issue Fee  
☐ Publication Fee (No small entity discount permitted)  
☐ Advance Order - # of Copies \_\_\_\_\_

4b. Payment of Fee(s): (Please first reapply any previously paid issue fee shown above)

- ☐ A check is enclosed.  
☐ Payment by credit card. Form PTO-2038 is attached.  
☐ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment, to Deposit Account Number \_\_\_\_\_ (enclose an extra copy of this form).

5. Change in Entity Status (from status indicated above)

- ☐ a. Applicant claims SMALL ENTITY status. See 37 CFR 1.27. ☐ b. Applicant is no longer claiming SMALL ENTITY status. See 37 CFR 1.27(g)(2).

NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

Authorized Signature \_\_\_\_\_ Date \_\_\_\_\_  
 Typed or printed name \_\_\_\_\_ Registration No. \_\_\_\_\_

This collection of information is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

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10/761,683	01/21/2004	Manabu Hara	SONYJP 3.0-355	3355
530	7590	07/11/2008	EXAMINER	
LERNER, DAVID, LITTENBERG, KRUMHOLZ & MENTLIK 600 SOUTH AVENUE WEST WESTFIELD, NJ 07090			CUTLER, ALBERT H	
			ART UNIT	PAPER NUMBER
			2622	
DATE MAILED: 07/11/2008				

## Determination of Patent Term Adjustment under 35 U.S.C. 154 (b) (application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 760 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 760 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (<http://pair.uspto.gov>).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

# Notice of Allowability

## Application No.

10/761,683

## Examiner

ALBERT H. CUTLER

## Applicant(s)

HARA, MANABU

## Art Unit

2622

### - The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the RCE filed 18 June 2008.
2. ☒ The allowed claim(s) is/are 1-18.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☒ All b) ☐ Some\* c) ☐ None of the:
    1. ☒ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

## Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO/SB/08),  
Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_\_
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_.

/Ngoc-Yen VU/  
SPE - 2622

### **DETAILED ACTION**

1. This office action is responsive to communication filed on June 18, 2008. Claims 1-18 are pending in the application.

#### ***Continued Examination Under 37 CFR 1.114***

2. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on June 18, 2008 has been entered.

#### ***Information Disclosure Statement***

3. The information disclosure statement (IDS) submitted on June 18, 2008 was filed after the mailing date of the notice of allowance on March 14, 2008, and after a petition filed June 18, 2008 was granted withdrawing said allowance. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement has been considered by the examiner.

#### ***Allowable Subject Matter***

4. Claims 1-18 are allowed.
5. The following is an examiner's statement of reasons for allowance:  
Consider claim 1, the closest prior art of record (JP 06-153087) teaches:

A pixel compensating circuit (figure 4) for compensating defect pixels included in a video signal (see paragraphs 0006-0008) comprising:

a color information holding unit (frame memory, 45) for holding plural kinds of color information of a defect pixel and pixels adjacent said defect pixel (See paragraphs 0015 and 0016. Frame memory (45) holds three frames of pixel data (R, G and B) including defecting and non-defective pixels.), said color information of said defect pixel including defective color information and non-defective color information (See paragraphs 0019 and 0020. The frame memory holds defective color information (Px) and corresponding non-defective pixel information (Qx) for specific pixel locations, with Px and Qx corresponding to different color spaces.);

a difference calculating unit for calculating differences between non-defective color information (Qx) of said defect pixel and corresponding color information of said pixels (Q1-Q8) adjacent said defect pixel (See paragraphs 0019 and 0020. Absolute values of differences between non-defective pixel (Qx) and surrounding pixels (Q1-Q8) are calculated.);

a reference pixel determining unit for determining a reference pixel (Y) having color information that is the most similar to said non-defective color information (The pixel having the lowest absolute value difference from the non-defective pixel is calculated and written into a Y address buffer.).

The closest prior art then teaches replacing the defect pixel (Px) with the value of an adjacent pixel of the same color space (P) according to the pixel location (Y) determined as the reference pixel location above (paragraph 0021).

However, the prior art of record does not teach nor reasonably suggest a compensating unit for calculating an average value of said differences between said reference pixel and said defect pixel, and setting defective color information of said defect pixel to the value of the corresponding color information of said reference pixel minus said average value as required by claim 1.

Claims 2-6 are allowed as being dependent upon and allowed claim 1.

Consider claim 7, the closest prior art of record (JP 06-153087) teaches:

A pixel compensating method for compensating a defect pixel of a video signal (paragraphs 0015-0021), comprising the steps of:

holding plural kinds of color information of defect pixel and pixels adjacent said defect pixel (See paragraphs 0015 and 0016. Frame memory (45) holds three frames of pixel data (R, G and B) including defecting and non-defective pixels.), said color information of said defect pixel including defective color information and non-defective color information (See paragraphs 0019 and 0020. The frame memory holds defective color information (Px) and corresponding non-defective pixel information (Qx) for specific pixel locations, with Px and Qx corresponding to different color spaces.);

calculating differences between non-defective color information among said color information of said defect pixel and corresponding color information of said pixels adjacent said defect pixel (See paragraphs 0019 and 0020. Absolute values of

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differences between non-defective pixel (Qx) and surrounding pixels (Q1-Q8) are calculated.);

determining a reference pixel (Y) having color information that is the most similar to said non-defective color information (The pixel having the lowest absolute value difference from the non-defective pixel is calculated and written into a Y address buffer.);

The closest prior art then teaches replacing the defect pixel (Px) with the value of an adjacent pixel of the same color space (P) according to the pixel location (Y) determined as the reference pixel location above (paragraph 0021).

However, the closest prior art does not teach nor reasonably suggest calculating an average value of said differences between said reference pixel and said defect pixel, and setting defective color information of said defect pixel to the value of the corresponding color information of said reference pixel minus said average value as required by claim 7.

Claims 8-12 are allowed as being dependent upon and allowed claim 7.

Consider claim 13, the closest prior art of record (JP 06-153087) teaches:

An image taking apparatus (Image pickup equipment, figure 4) including a pixel compensating circuit (see figure 4) for compensating defect pixels included in a video signal (see paragraphs 0006-0008) comprising:

a color information holding unit (frame memory, 45) for holding plural kinds of color information of a defect pixel and pixels adjacent said defect pixel (See paragraphs 0015 and 0016. Frame memory (45) holds three frames of pixel data (R, G and B) including defecting and non-defective pixels.), said color information of said defect pixel including defective color information and non-defective color information (See paragraphs 0019 and 0020. The frame memory holds defective color information (Px) and corresponding non-defective pixel information (Qx) for specific pixel locations, with Px and Qx corresponding to different color spaces.);

a difference calculating unit for calculating differences between non-defective color information (Qx) of said defect pixel and corresponding color information of said pixels (Q1-Q8) adjacent said defect pixel (See paragraphs 0019 and 0020. Absolute values of differences between non-defective pixel (Qx) and surrounding pixels (Q1-Q8) are calculated.);

a reference pixel determining unit for determining a reference pixel (Y) having color information that is the most similar to said non-defective color information (The pixel having the lowest absolute value difference from the non-defective pixel is calculated and written into a Y address buffer.).

The closest prior art then teaches replacing the defect pixel (Px) with the value of an adjacent pixel of the same color space (P) according to the pixel location (Y) determined as the reference pixel location above (paragraph 0021).

However, the prior art of record does not teach nor reasonably suggest a compensating unit for calculating an average value of said differences between said

reference pixel and said defect pixel, and setting defective color information of said defect pixel to the value of the corresponding color information of said reference pixel minus said average value as required by claim 13.

Claims 14-18 are allowed as being dependent upon and allowed claim 13.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ALBERT H. CUTLER whose telephone number is (571)270-1460. The examiner can normally be reached on Mon-Thu (9:00-5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ngoc-Yen Vu can be reached on (571)-272-7320. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

AC  
06/26/2008

***/Ngoc-Yen T. VU/***

***Supervisory Patent Examiner, Art Unit 2622***